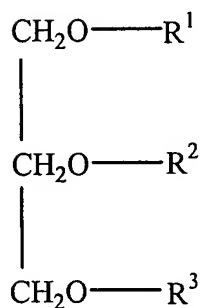


## CLAIMS

What is claimed is:

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1. An acylglyceride having the following structure:



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wherein R1 and R3 are acyl residues selected from the group consisting of 10,12; 9,11; 8,10; and 11,13 octadecadienoate and R2 is selected from the group consisting of long chain and medium chain fatty acyl residues.

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2. The acylglyceride of Claim 1, wherein said medium chain fatty acyl residue is selected from the group consisting of acyl residues of the following acids: decanoic acid, undecanoic acid, 10-undecanoic acid, lauric acid, cis-5-dodecanoic acid, tridecanoic acid, myristic acid, and myristoleic acid.

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3. The acylglyceride of Claim 1, wherein said long chain acyl residue is selected from the group consisting of acyl residues of the following acids: pentadecanoic acid, palmitic acid, palmitoleic acid, heptadecanoic acid, stearic acid, elaidic acid, oleic acid, nonadecanoic acid, eicosanoic acid, cis-11-eicosenoic acid, 11,14-eicosadienoic acid, heneicosanoic acid, docosanoic acid, erucic acid, tricosanoic acid, tetracosanoic acid, nervonic acid, pentacosanoic acid, hexacosanoic acid, heptacosanoic acid, octacosanoic acid, nonacosanoic acid, triacosanoic acid, vaccenic acid, tariric acid, and ricinoleic acid.

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4. A powder comprising at least one type of acylglyceride as set forth in Claim 1.

5. An oil comprising at least one type of acylglyceride as set forth in Claim 1.

5 6. The oil of Claim 5, wherein said oil further comprises an antioxidant.

7. A food composition comprising at least one type of acylglyceride as set forth in Claim 1.

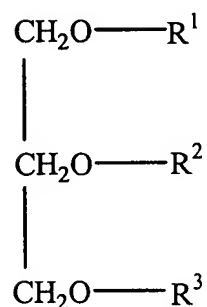
10 8. The food composition of Claim 7, wherein said food composition is a functional food, nutritional supplement food, infant food, pregnancy food, or elderly food.

9. A pharmaceutical composition comprising at least one type of triglyceride as set forth in Claim 1.

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10. A nutritional or pharmaceutical composition comprising at least one type of acylglyceride as set forth in Claim 1 and a carrier suitable for oral, intrainstestinal, or parenteral administration.

20 11. An acylglyceride having the following structure:



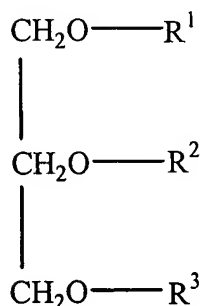
wherein R1 and R3 are acyl residues selected from the group consisting of medium chain and long claim fatty acyl residues and R2 is selected from the group consisting of 10,12; 9,11; 8,10; and 11,13 octadecadienoate residues.

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12. The acylglyceride of Claim 11, wherein said long chain fatty acyl residue is selected from the group consisting of acyl residues of the following acids: pentadecanoic acid, palmitic acid, palmitoleic acid, heptadecanoic acid, stearic acid, elaidic acid, oleic acid, nonadecanoic acid, eicosanoic acid, cis-11-eicosenoic acid, 11,14-eicosadienoic acid, heneicosanoic acid, docosanoic acid, erucic acid, tricosanoic acid, tetracosanoic acid, nervonic acid, pentacosanoic acid, hexacosanoic acid, heptacosanoic acid, octacosanoic acid, nonacosanoic acid, triacosanoic acid, vaccenic acid, tariric acid, and ricinoleic acid.
13. The acylglyceride of Claim 11, wherein said medium chain acyl residue is selected from the group consisting of acyl residues of the following acids: decanoic acid, undecanoic acid, 10-undecanoic acid, lauric acid, cis-5-dodecanoic acid, tridecanoic acid, myristic acid, and myristoleic acid.
14. A powder comprising at least one type of acylglyceride as set forth in Claim 11.
15. An oil comprising at least one type of acylglyceride as set forth in Claim 11.
16. The oil of Claim 15, wherein said oil further comprises an antioxidant.
17. A food composition comprising at least one type of acylglyceride as set forth in Claim 1.
18. The food composition of Claim 17, wherein said food composition is a functional food, nutritional supplement food, infant food, pregnancy food, or elderly food.
19. A pharmaceutical composition comprising at least one type of triglyceride as set forth in Claim 11.

20. A nutritional or pharmaceutical composition comprising at least one type of acylglyceride as set forth in Claim 11 and a carrier suitable for oral, intrainestinal, or parenteral administration.

5 21. An acylglyceride having the following structure:



10 wherein R1 and R3 are acyl residues selected from the group consisting of 10,12; 9,11; 8,10; and 11,13 octadecadienoate and R2 is selected from the group consisting of  $\omega$ 3,  $\omega$ 6, and  $\omega$ 9 fatty acyl residues.

15 22. The acylglyceride of Claim 21, wherein said  $\omega$ 3 fatty acyl residue is selected from the group consisting of 9,12,15-octadecatrienoate; 6,9,12,15-octadecatetraenoate; 11,14,17-eicosatrienoate; 8,11,14,17-eicosatetraenoate; 5,8,11,14,17-eicosapentaenoate; 7,10,13,16,19-docosapentaenoate; and 4,7,10,13,16,19-docosahexaenoate.

20 23. The acylglyceride of Claim 21, wherein said  $\omega$ 6 fatty acyl residue is selected from the group consisting of 6,9,12-octadecatrienoate; 8,11,14-eicosatrienoate; 5,8,11,14-eicosatetraenoate; 7,10,13,16-docosatetraenoate and 4,7,10,13,16-docosapentaenoate.

24. The acylglyceride of Claim 21, wherein said  $\omega$ 9 fatty acyl residue is selected from the group consisting of 6,9-octadecadienoate; 8,11-eicosadienoate; and 5,8,11-eicosatrienoate.

25 25. A powder comprising at least one type of acylglyceride as set forth in Claim 21.

26. An oil comprising at least one type of acylglyceride as set forth in Claim 21.

27. The oil of Claim 26, wherein said oil further comprises an antioxidant.

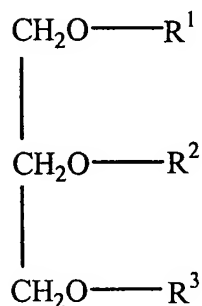
5 28. A food composition comprising at least one type of acylglyceride as set forth in Claim 21.

29. The food composition of Claim 28, wherein said food composition is a functional food, nutritional supplement food, infant food, pregnancy food, or elderly food.

10 30. A pharmaceutical composition comprising at least one type of triglyceride as set forth in Claim 21.

15 31. A nutritional or pharmaceutical composition comprising at least one type of acylglyceride as set forth in Claim 21 and a carrier suitable for oral, intrainestinal, or parenteral administration.

32. An acylglyceride having the following structure:



wherein R1 and R3 are acyl residues selected from the group consisting of  $\omega$ 3,  $\omega$ 6, and  $\omega$ 9 fatty acyl residues and R2 is selected from the group consisting 10,12; 9,11; 8,10; and 11,13 octadecadienoate residues.

33. The acylglyceride of Claim 32, wherein said  $\omega$ 3 fatty acyl residue is selected from the group consisting of 9,12,15-octadecatrienoate; 6,9,12,15-octadecatetraenoate; 11,14,17-eicosatrienoate; 8,11,14,17-eicosatetraenoate; 5,8,11,14,17-eicosapentaenoate; 7,10,13,16,19-docosapentaenoate; and 4,7,10,13,16,19-docosahexaenoate.

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34. The acylglyceride of Claim 32, wherein said  $\omega$ 6 fatty acyl residue is selected from the group consisting of 6,9,12-octadecatrienoate; 8,11,14-eicosatrienoate; 5,8,11,14-eicosatetraenoate; 7,10,13,16-docosatetraenoate and 4,7,10,13,16-docosapentaenoate.

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35. The acylglyceride of Claim 32, wherein said  $\omega$ 9 fatty acyl residue is selected from the group consisting of 6,9-octadecadienoate; 8,11-eicosadienoate; and 5,8,11-eicosatrienoate.

36. A powder comprising at least one type of acylglyceride as set forth in Claim 32.

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37. An oil comprising at least one type of acylglyceride as set forth in Claim 32.

38. The oil of Claim 37, wherein said oil further comprises an antioxidant.

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39. A food composition comprising at least one type of acylglyceride as set forth in Claim 32.

40. The food composition of Claim 39, wherein said food composition is a functional food, nutritional supplement food, infant food, pregnancy food, or elderly food.

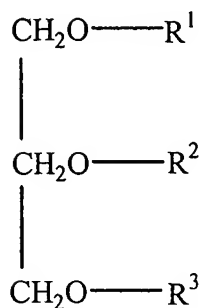
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41. A pharmaceutical composition comprising at least one type of triglyceride as set forth in Claim 32.

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42. A nutritional or pharmaceutical composition comprising at least one type of acylglyceride as set forth in Claim 32 and a carrier suitable for oral, intrainestinal, or parenteral administration.

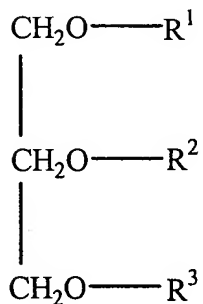
43. An acylglyceride having the following structure:



5 wherein R1 and R3 are 10,12 octadecadienoate and R2 is 9,11 octadecadienoate.

44. The acylglyceride of Claim 43, wherein said 10,12 octadecadienoate is t10,c12 octadecadienoate and said 9,11 octadecadienoate is c9,t11 octadecadienoate.

10 45. An acylglyceride having the following structure:



wherein R1 and R3 are 9,11 octadecadienoate and R2 is 10,12 octadecadienoate.

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46. The acylglyceride of Claim 43, wherein said 10,12 octadecadienoate is t10,c12 octadecadienoate and said 9,11 octadecadienoate is c9,t11 octadecadienoate.